Panasonic

ideas for life

Full **HD** Home Cinema Systems

VIERA

Blu-ray Disc™

VIERA

Panasonic Full **HD** CINEMA

High Quality Image Reproduction

Full HD Plasma TV / IPS LCD TV

High Quality Sound Reproduction

Twin Centre

Experience True High Definition.

Today's Blu-ray discs and other high-definition sources offer images of stunning beauty.
But to enjoy their full potential, you need a home cinema system in which all the components – TV, player, receiver and speakers – work together as a well balanced unit.
Panasonic makes it easy to construct a home cinema system in which breathtaking images and pure, clear sound come beautifully together. Ease of operation is outstanding too.
With a Panasonic home cinema system, entering a world of remarkable high-definition entertainment is as easy as pushing a button.

High Quality Sound
7.1channel Sound

High Quality Signal Processing
Blu-ray / 1080p

HDMI / Viera Link

The Panasonic DMP-BD10 accurately reproduces the high-resolution images and high quality sound recorded on a Blu-ray disc. The TH-65PV600A 65-inch Plasma TV displays full-HD images (1920 x 1080 pixels) from the signals it receives, without downscaling.
The SA-XR700 AV Receiver delivers powerful 7.1-channel audio from the huge amount of data it receives. The SB-TP1000 Home Theatre Speaker System, featuring Panasonic's original Twin Centre, delivers both clear, crisp dialogue that seems to come right from the screen and an outstanding, lifelike surround effect. And it's all easy to enjoy thanks to Viera Link*, which lets you operate all connected components at once by pressing a single button on the remote control.
A perfect balance of beautiful pictures, stunning sound and easy operation.
Panasonic puts together everything you need for the ultimate home cinema experience.

65-inch **Full HD Plasma TV** Cinema

65-inch HD Plasma TV
TH-65PV600A

Blu-ray Disc™ Player
DMP-BD10

AV Receiver
SA-XR700

Home Theatre Speaker System
SB-TP1000

*Operates when the TH-65PV600A is connected to Viera Link enabled AV devices via HDMI.

65-inch Full High-Definition Plasma Display

TH-65PV600A

The display panel offers outstanding 1920 x 1080p resolution.
Both the processor and driver support HD 1080p images.
The TH-65PV600A brings out the best from every HD source, giving you crisp, vivid still pictures and smooth, sharp motion images, plus the grandeur only a 65-inch screen can provide.

Full High-Definition Makes Images Look So Real, You Want to Reach Out and Touch Them

VIERA

Panasonic's Acclaimed High-Image-Quality Technologies **VIERA Black Box Technology**

Viera Black Box is the collective name for original technologies developed by Panasonic to enhance total image quality. From input to display, VIERA uses all-digital video signal processing to create crisp, vivid, smooth images with true, rich blacks - images that are both visually appealing and capable of delivering tremendous emotional impact. Panasonic's commitment to achieving the ultimate in picture quality is reflected in the fact that all key devices in VIERA - from processor to driver to panel - are produced totally in-house.

VIERA PROCESSOR
This key device processes the video signal it receives, outputting an extremely high-quality signal that helps create the beautiful, high-definition images that distinguish VIERA.

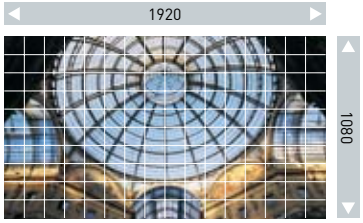
VIERA DRIVER
This high-performance driver helps optimise the performance of the panel, allowing it to display breathtaking images with crisp detail, smooth motion and finely nuanced gradation.

VIERA FULL HD PANEL
The Viera full HD panel clearly and vividly displays the video signal after it is processed by the Viera processor and driver. It produces deep, rich blacks and sharp, beautiful images with vivid colours even when viewing in bright light.

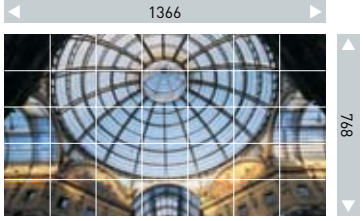
1080p resolution for lifelike images and more detail

Full HD Plasma Panel

The TH-65PV600A features a 65"-type full HD plasma panel with 1920 (horizontal) x 1080 (vertical) pixels. Panasonic's microcell discharge stabilisation technology and newly developed high-speed driver technology make it possible to reproduce HDTV broadcasts (1920 x 1080) in their full original resolution. With a Panasonic full HD plasma panel, you enjoy smoother images and greater detail than any conventional HD panel can offer.



TH-65PV600A Full HD Panel 2.07 million pixels (approx.)

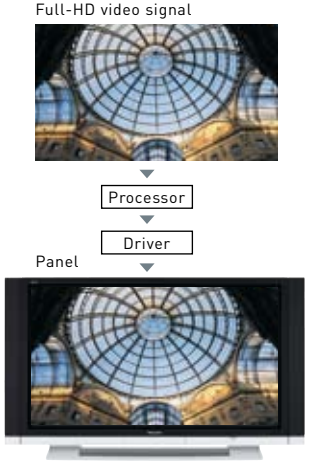


Conventional 50-inch HD Panel 1.05 million pixels (approx.)

Maintaining the highest data quality from input all the way to output

Full HD Digital Processing

The full-HD video signal allows the reproduction of highly expressive images with exceptional detail and full 1920 x 1080 resolution. It helps maximise performance of the full HD plasma panel, so you enjoy clear, vibrant, beautiful pictures with extraordinary detail.



Full HD direct processing of the HD signals (1920 x 1080) from input to output

Up-converting video signals to provide higher image quality from non-HD sources

1080p Digital Re-mastering Processor

This processor up-converts a variety of video signals, such as those from analogue broadcasts and DVD movies, to provide beautifully clear images with sharper details and more life-like realism. The resulting images have sharper details and more life-like realism.

Standard-definition

Re-mastering

Deep, rich blacks for an enhanced spatial effect

Real Black Creation

Two original Panasonic technologies, the Real Black Drive System and New Deep Black Filter, help achieve exceptionally deep, rich blacks and Max.5,000:1 contrast in dark image areas.

Conventional

Real Black Drive System

Images with such clear, sharp detail, you can even see textures

Real Gamma Control

Maximum 16-bit video processing makes it possible to reproduce images with 4,096 equivalent steps of gradation. The picture noise and black blocking that occur with insufficient gradation is suppressed even in scenes with intricate detail, fine textures and subtle expressions. Even the most detailed parts of an image are rendered with beautiful smoothness.

4,096 equivalent steps*

* Indicates the ability to express the equivalent of 4,096 steps of gradation.

Contrast is detected and optimised in each scene, so images are clear and beautiful from corner to corner

Contrast Management System

Original Panasonic technology optimises the contrast by matching it to the images in each scene. Instead of losing gradation by making part of the image too bright or too dark, this new technology applies just the right amount of contrast correction for each part of the scene. The result brings natural beauty to all parts of the scene.

Ordinary Correction

Contrast Management System

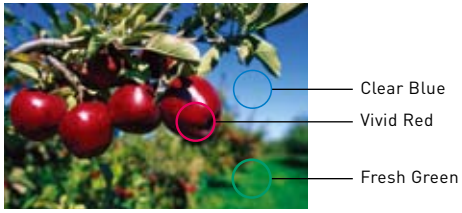
Enhancing dark areas washes out the highlights.

Brightens the subject without changing the background.

Vivid, vibrant colours that will linger in your mind's eye

Advanced 3D Colour Management

The Colour Management System achieves precise control based on 3D management in the colour difference plane and brightness directions. This finer level of control produces more expressive images.

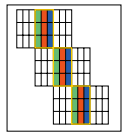


Sharpness enhanced for clearer, crisper pictures

Sub-Pixel Controller

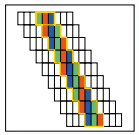
The Sub-Pixel Controller eliminates jagged or blurred diagonal lines and produces smoother edges. Unlike conventional systems in which the three RGB colours are processed together, this advanced system processes each colour separately for crisper, more natural-looking images.

Conventional



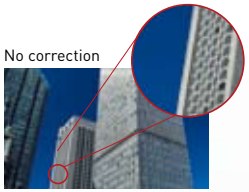
The R, G and B dots are processed as one pixel.

VIERA



The R, G and B colors are processed dot-by-dot.

No correction



Correction

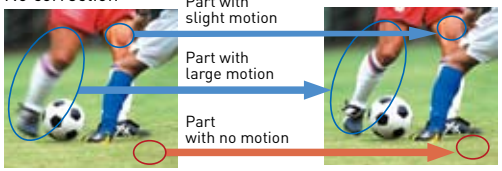
Even fast-moving athletes are clear and smooth on the large screen

Motion Pattern Noise Reduction

The Motion Pattern Noise Reduction circuit detects motion patterns that tend to generate noise, and makes adjustments to maximise image quality. It helps produce clean, sharp images with outstanding gradation, even in scenes with considerable motion. The result is a noticeable improvement in moving picture quality.

No correction

Correction



VIERA finely divides each scene into numerous parts, then detects the motion in each part and applies noise reduction where required.

A superb sound that enhances the VIERA viewing experience

High-Quality Speaker System

The TH-65PV600A's vivid, large-screen,high-resolution images look even better when accompanied by a beautiful sound. That's why Panasonic equipped the TH-65PV600A with a superb 3-way speaker system that provides clear, pure sound reproduction across a wide dynamic range from 900 Hz to 20 kHz.
This system combines a woofer, squawker and tweeter. The woofer and squawker have the equivalent of a large 12-cm diameter, allowing them to produce rich, dynamic bass and midrange sounds. The diaphragm uses an open cone design rather than the conventional pressed cone to deliver a crisper sound. The large 5-cm-diameter tweeter is positioned in the center of the speaker box. Electromagnetic damping allows the tweeter to cover a high-frequency range all the way up to 20 kHz and reproduce clear, transparent sounds.
With the TH-65PV600A's high-quality speakers, you hear sounds from the subtle and delicate to the thunderous and dynamic - all with a clarity and ambience that help draw you right into the beautiful picture.

SRS TruSurround XT — A Richer, More Expansive Sound

The TH-65PV600A also features SRS TruSurround XT, a sound-enhancing system that expands the acoustic field, making it possible for these two speaker systems to produce a virtual 5.1-channel surround effect that wraps the listener in a pure, clear sound. Developed by SRS Labs, Inc., SRS TruSurround XT is a 3D sound reproduction technology that's based on the Head-Related Transfer Function - part of a theory that concerns the relationship between frequency change and the human ear's ability to determine the direction of a sound. This technology solves the problem of narrow "sweet spots," a shortcoming of ordinary stereo reproduction systems. Used in the TH-65PV600A, it helps provide expansive surround sounds across a wide listening range.

* TruSurround XT, SRS and (●) Symbol are trademarks of SRS Labs, Inc.

Woofer and Squawker
With the equivalent of a large 12-cm diameter (13 x 6 cm) size, the woofer and squawker produce rich, dynamic sounds.

Tweeter
The 5-cm tweeter reproduces clear treble sounds.

A smart new way to enjoy the world of high-quality AV

Viera Link

Now you can enjoy the beautiful sounds and pictures of high-quality AV equipment without all the messy, unsightly cables. With HDMI, a single cable* carries the video, audio and control signals between two digital components. By using Panasonic Viera Link compatible components, you can turn on the power for your entire home theatre with a single remote control button, and begin playback immediately.

Panasonic is working to eliminate RoHS substance usage

Eco-friendly Design

Panasonic is actively working to eliminate the use of the six substances specified in the RoHS Directive of the European Union. Plans call for eliminating these substances from all Panasonic products at least a few year prior to the date on which the RoHS Directive takes effect.

The RoHS Directive
Officially called the "Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment," the RoHS Directive bans the use of six substances (lead, mercury, cadmium, hexavalent chromium, polybrominated biphenals (pbb), and polybrominated diphenyl ethers (pbde), and takes effect in July 2006.

Panasonic VIERA boasts a long service life of approximately 60,000 hours*

Long Service Life

By making the panel glass thinner, we were able to increase the light transmission to create a brighter picture with less power. We're also proud to have achieved a VIERA lifetime of about 60,000 hours.

* The time until panel brightness is reduced to half its initial level. However, this time varies depending on the content of the images displayed and the usage environment. (The service life given above is intended as a guideline when displaying standard moving images.)

* Depending on the cable used, this function may not be possible. Panasonic HDMI cables are highly recommended.

Universal Design

Remote Control

In accordance with Universal Design principles, this new Panasonic remote control features large, easy-to-see buttons and markings. The buttons used most often are larger than the others and grouped according to function. We also give it a shape that feels comfortable in the hand and easy to hold.

•Large, easy-to-see buttons
We increased the contrast of the large 10-key number pad, volume control, and channel up/down keys to make them easier to see.

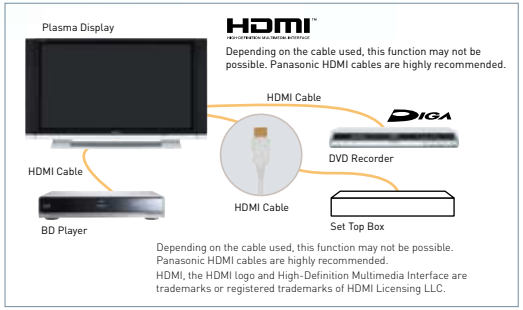
•Intuitive layout
The volume control and channel up/down keys are positioned in the centre. Buttons not used often are concealed behind the cover.

•Easy-to-hold, ergonomic design
Careful attention to materials and design has resulted in a unit that fits the hand well, feels secure, and is easy to hold.

HDMI is paving the way to a more advanced and connected AV world

Triple HDMI Terminals

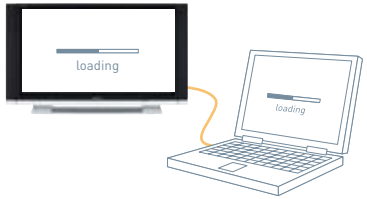
HDMI is a standard developed for use in connecting different types of digital video and audio components. Equipment with HDMI terminals can be connected to each other with a single cable, letting you enjoy superior digital picture and sound quality without a lot of cables cluttering the area. Equipped with three of these next-generation terminals, VIERA is ready to be part of an expanding home AV system.


Plasma Display
HDMI
Depending on the cable used, this function may not be possible. Panasonic HDMI cables are highly recommended.
HDMI Cable
DIGA
DVD Recorder
HDMI Cable
HDMI Cable
BD Player
Set Top Box
Depending on the cable used, this function may not be possible. Panasonic HDMI cables are highly recommended.
HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

Enjoy large-screen Internet surfing

PC Input

Equipped with a PC (RGB) signal input terminal, VIERA can connect with a personal computer and serve as a large-screen monitor for surfing the Internet. The D-sub 15-pin RGB terminal is set right on the front panel for easy connection of a laptop PC.



View photos from a digital camera on VIERA's large screen

SD Card Slot

An SD card slot on the VIERA front panel makes it easy to view shots from a digital camera on the large, beautiful screen. With a Panasonic LUMIX and e.cam, you can take high-resolution photos sized to fit a TV screen with a 16:9 (1,920 x 1,080) aspect ratio. Simply take the SD card from the camera and slip it into VIERA's card slot, and you can literally fill the big screen with your own high-resolution photos.

* When using an SD card to display 16:9 photos on a plasma display panel, the image will sometimes not be displayed in full-screen size.

* JPEG images up to XGA resolution

Form that goes beyond mere design

Elegant, Flowing Design

VIERA introduces an elegant, flowing design that accentuates the unit's thin profile and flat screen and beautifully complements the brilliant images. This innovative styling seems to erase the border between the image and its surroundings, allowing the television to meld with the picture. VIERA blends seamlessly into the room. Images appear almost to float in mid-air, adding to their sense of depth and dimensionality.

Blu-ray Disc™ Player

DMP-BD10

DMP-BD10: Unleashing the Full Potential of BD-Video Discs

A BD-Video disc can hold huge amounts of video and audio data. To unleash its full quality potential, you need a disc player that provides 103 million pixel-per-second video processing plus audio processing that's 1,000 times higher than typical CD players.

The Panasonic DMP-BD10 goes far beyond those specifications. With 15 billion pixel-per-second processing and 192kHz/24bit audio for each of eight channels, this new Blu-ray Disc™ player provides a level of image and sound quality that is truly amazing.

The DMP-BD10 reflects Panasonic's concept for developing HD products - displays, players, AV receivers, speakers and more – that reproduce images and sounds with beauty capable of stirring deep emotion.

At Panasonic, easy operation is important too. The DMP-BD10 comes equipped with Viera Link, a function that links operation of an Viera Link compatible TV and receiver, so you can control both at the same time with a single button. With the DMP-BD10, Panasonic invites you to discover an entirely new dimension of entertainment – one with HD-quality* images and sounds that surpass anything you've ever experienced.

* HD monitor required.

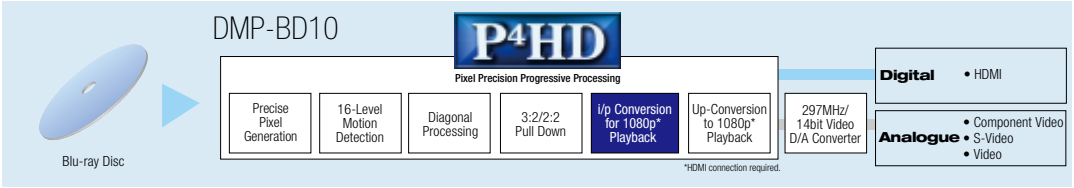
"Blu-ray Disc" and Blu-ray Disc are trademarks.

High Definition Picture Quality

Pure, Detailed Images with Rich, Vibrant Colours. The Most Beautiful Picture You've Ever Seen.

Think about a marvelous ceiling painting with intricate detail. Or beautiful evening scenery with many subtle variations of the same colour.
The DMP-BD10 renders images like these with enormous accuracy, faithfully conveying details, textures and colour depth, using more than 2 million pixels to create each frame. The high-definition* images reproduced by the DMP-BD10 may be the most beautiful images you've ever seen.

* HD monitor required.



Precise Digital Video

P⁴HD (Pixel Precision Progressive Processing for HD)

To get the best HD images from a BD-Video disc, you need a player that renders high-quality progressive images, expresses motion smoothly, and draws sharp diagonal lines. The DMP-BD10's P⁴HD processes more than 15 billion pixels per second and applies the optimum processing to every pixel in the video data on the disc.
The result is images with exceptional resolution.

P⁴HD
Pixel Precision Progressive Processing

i/p Conversion for 1080p* Playback

1080i (HD Signal) → 1080p (Progressive HD Signal)

- Precise Pixel Generation
- 16-Level Motion Detection
- Diagonal Processing
- 3:2/2:2 Pull Down

The P⁴HD achieves high-speed, highly precise i/p conversion with Precise Pixel Generation,16-Level Motion Detection,Diagonal Processing and 3:2/2:2 Pull Down Processing. This makes it possible to convert 480i, 576i and even previously difficult-to-convert 1080i signals to full-HD 1080p images.

* HDMI connection required.

Up-Conversion to 1080p* Playback

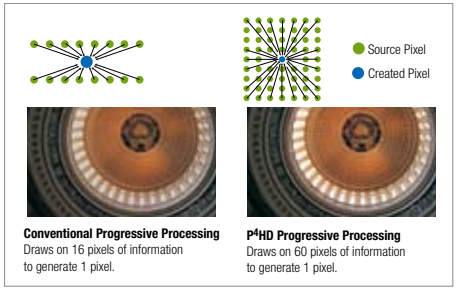
480i/p, 720p, 1080i → 1080p (Progressive HD Signal)

- Precise Pixel Generation

When playing a BD-Video or DVD disc, the P⁴HD up-converts content recorded in the 480i/p, 576i/p, 720p or 1080i format to 1080p with Precise Pixel Generation that generates each pixel from 60 surrounding pixels of information. You enjoy superb 1080p-level image quality.

* HDMI connection required.

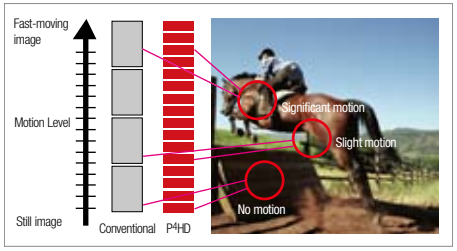
•Precise Pixel Generation


Source Pixel
Created Pixel
Conventional Progressive Processing
Draws on 16 pixels of information to generate 1 pixel.
P⁴HD Progressive Processing
Draws on 60 pixels of information to generate 1 pixel.

BD-Video supports a number of formats. For example, the highest-quality format (1920 x 1080 pixels) can be produced at any of four different frame rates - 59.94i, 50i, 23.976p and 24p – and the compression format can be MPEG2, MPEG4 AVC or VC-1. The BD-Video player must detect these instantly and perform progressive conversion when necessary.
Both for the de-interlacing and scaling, the DMP-BD10's super-high-speed P⁴HD generates each pixel correctly according to information obtained from up to 60 surrounding pixels. Applying progressive processing to huge amounts of data, it delivers images of striking beauty.

•16-Level Motion Detection with Pixel-Based Motion Adaptive

For optimum progressive conversion, the processing must suit the motion of the image. The super-high-speed P⁴HD categorises the image motion of each pixel into one of 16 levels, from stationary to super fast. For areas with stationary images, it applies the progressive processing best suited to still images. In other areas it applies processing that matches the degree of motion. The results are stunningly beautiful progressive images with minimum conversion errors.



•Diagonal Processing

The ability to create smooth, sharp diagonal lines is a key in progressive conversion. The P⁴HD quickly detects diagonals and applies correction to the pixels accordingly. In reproducing the kinds of geometric patterns often seen in architecture, for example, the DMP-BD10 provides exceptionally smooth, sharp diagonal lines whether the image is still or moving.

•3:2/2:2 Pull-Down Progressive Processing

The P⁴HD instantly determines whether a source is film or video and optimizes the processing accordingly. Applying 3:2 or 2:2 pull-down with movie software, it makes images look natural and true to life.

Natural Analogue Video

297MHz/14bit Video D/A Converter

DMP-BD10 incorporates a 297MHz, 14bit Video D/A Converter from Analog Devices Co. Ltd. that provides high-quality 4x oversampling for 1080i/720p output. NSV (noise shaping video) processing shifts the noise component to an unused band to further boost the signal-to-noise ratio. And finally, we added extremely fine 14bit signal processing that renders ultra-fine images with smooth gradation. Thanks to technologies like these, the DMP-BD10 can theoretically reproduce up to nearly 4400 billion colours.

High Quality Sound

High-Definition Audio—
The Lifelike Ambience of 7.1-Channel Surround Sound

In order to fully enjoy the beauty of HD images, you need to combine them with equally impressive sound. The DMP-BD10 lets you experience the awesome power of Dolby Digital Plus 7.1-channel surround sound, which far exceeds the usual 5.1-channel surround sound of DVD. Processing a massive amount of information, it can recreate the ambience of a concert hall with remarkable accuracy.

"Dolby Digital" and the double-D symbol are trademarks of Dolby Laboratories

Dynamic Range of 118 dB

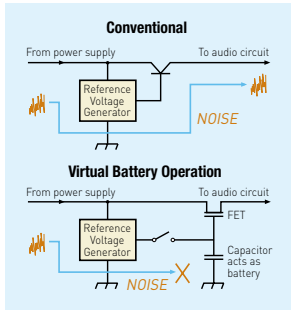
The DMP-BD10 has a dynamic range of 118 dB. This allows it to dynamically reproduce a wide variety of sounds, from a tranquil, fading pianissimo to a thunderous and booming fortissimo.

192kHz/24bit Audio D/A Converter for All Channels

The DMP-BD10 uses a 192kHz/24bit D/A converter for each of the eight channels to achieve truly superb surround sound. The D/A converter uses Advanced Segment D-A processing, which applies multi-bit processing to establish the audio reference and 1bit processing to render the delicate nuances. These combine to create a remarkably beautiful sound that has both power and purity.

Virtual Battery Operation

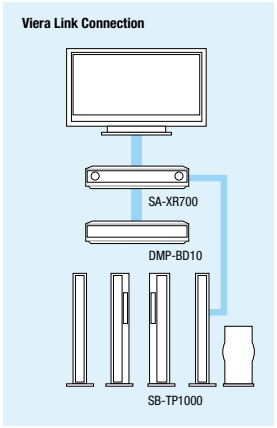
It prevents AC power supply noise from entering the audio circuitry, thereby isolating sound localization.



Intelligent Control

Making It Easy to Enjoy the Beauty

The DMP-BD10 gives you sensational images and sound, but the experience doesn't end there. It also adds super-easy operation. In a home cinema system featuring the DMP-BD10, you can control an Viera Link compatible TV and AV receiver at the same time by pressing a single button on the remote control. This intelligent linking function makes it easy to enjoy the beauty of HD entertainment.



Viera Link

With the DMP-BD10, easy operation is part of the picture. Connect it to an Viera Link compatible TV or AV receiver with an HDMI cable, and you can enjoy convenient linked operation. That means, for example, pressing one button on the receiver's remote control turns on the receiver and TV, switches the input source to Video, and changes the mode selector to Blu-ray Disc™ Player.
All you have to do is adjust the volume and enjoy. There is no simpler way to enjoy the beauty of BD-Video.

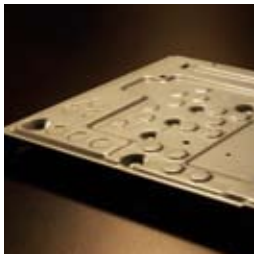
Non-HDMI-compliant cables cannot be utilised.

High Quality Audio Parts

Gold-Plated Thin-Film Chip Resistors
The resistors are gold-plated to improve electrical conductivity.

Gold-Plated Terminals
The input and output terminals are gold-plated to minimise oxidation and improve electrical conductivity.

Insulator with Shock Absorbing Rubber Sheet
An insulator with a shock absorbing rubber sheet helps reduce both the vibration generated by the system's components and the effects of external vibration.



Honeycomb Chassis
A honeycomb structure improves chassis rigidity and reduces adverse effects from resonance and other factors.

Pureism Capacitors
Featuring aluminium foil, a special electrolyte compound and oxygen-free copper leads, the Pureism Capacitor helps deliver a clear, delicately nuanced sound.

What's a Blu-ray Disc?

The Blu-ray Disc (BD) is a next-generation optical disc format for storing a large amount of data using a short wavelength blue laser to read and write. Like DVD, there are a number of BD standards, such as read-only BD-ROM, recordable BD-R and rewritable BD-RE.

The single largest feature of BD is its high-density data storage capacity of 25 GB# per layer on one side. This lets you store many hours of content, such as movies with HD resolution and high-quality music with loss-less audio compression. BD also features a high-performance interactive function that uses Java™, called BD-J, to deliver a new video experience to users not offered by conventional video media. With many motion picture production companies and electronics, PC and gaming manufacturers expressing their support for BD, new hardware and software products are expected to hit the market soon.

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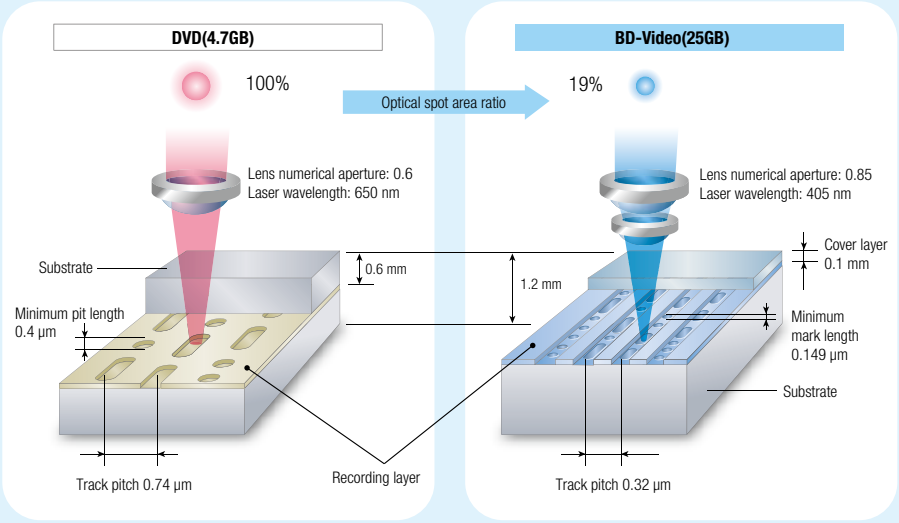
Structure of the BD-Video Disc

The Blu-ray Disc is an optical disc with the same dimensions as the DVD disc: 12 cm in diameter and 1.2 mm in thickness. By using a combination of the 405-nm-wavelength blue-violet laser, which is a shorter wavelength than the red laser used by DVD, and a high-density objective lens with a numerical aperture of 0.85, BD uses a laser beam spot that is only about 1/5 the size used by DVD. Thanks to these technologies, a single-layer BD-Video disc can store five times more data than a DVD disc.



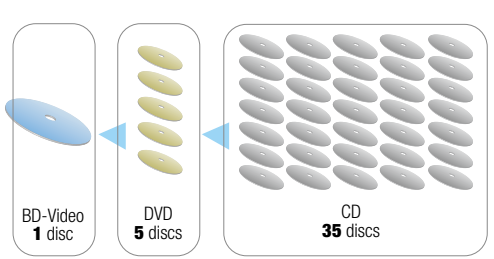
DVD		BD-Video Disc
650nm	Laser Wavelength	405nm
0.6	Numerical Aperture (NA)	0.85
120mm	Disc Diameter	120mm
1.2mm	Disc Thichness	1.2mm
0.6mm	Protection Layer	0.1mm
0.74µm	Track Pitch	0.32µm
4.7GB#	Capacity (Single-layer)	25GB#
8.5GB#	Capacity (Dual-layer)	50GB#
10.08Mbps	Data Transfer Rate	48Mbps

1GB=1 billion bytes. Useable capacity will be less.

Benefits of the BD-Video Disc

1. One Single-Layer Disc Equals Five DVDs in Data Capacity

The BD-Video disc boasts a data storage capacity of 25 GB# in a single layer and 50GB# in dual layer, because it uses the shorter wavelength blue-violet laser and a high-density objective lens to enable higher-density data reading. When a multi-layer system is adopted in the future, the storage capacity can increase to 100 GB# and even 200 GB#. One BD-Video disc can store a huge amount of data so users can enjoy many hours of high-definition content and high-quality surround sound that could not previously be provided by other media.



2. HD Image Quality Video

In addition to the MPEG-2 format used by DVD-Video, the BD-Video disc uses video codes, such as MPEG-4 AVC and VC-1, which deliver high image quality using high compression rates. The data transfer speed is 48 Mbps, which is about five times faster than DVD. A future plan also calls for a further increase in the data transfer speed. These technologies allow long-time playback of content with high-definition image quality.

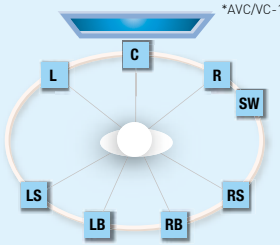
BD-ROM Video Formats

Compression methods	MPEG-2 MPEG-4 AVC SMPTE VC-1	
Maximum data transfer rate	48 Mbps	
Resolution and frame rate	1920 x 1080 1440 x 1080* 1280 x 720 720 x 480 720 x 576	59.94i, 50i, 23.976p, 24p 59.94i, 50i, 23.976p, 24p 59.94p, 50p, 23.976p, 24p 59.94i 50i

3. High-Quality Surround Sound

The BD-Video disc optionally supports next-generation surround sound formats like Dolby Digital Plus. Connecting a BD-Video player to an AV center using an HDMI* cable enables linear PCM multi-channel data transfer. This makes it possible to reproduce high-quality 7.1-channel surround sound with each channel offering DVD-Audio quality, delivering a surround sound experience that rivals the quality of the master audio source.

*AVC/VC-1 only



* HDMI Ver. 1.1 and newer.

4. BD-J for Extensive Interactive Functions

Some BD-Video disc is equipped with an extended function based on Java™ technology, called BD-J, to provide various interactive features. For example, this can be used to program various operations, such as displaying a pop-up menu while playing a BD-Video disc, and activating a keyword search. With unlimited application possibilities, BD-J offers interactive enjoyment that is simply not possible with conventional AV software.

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5. Extensive Support for Both Hardware and Software

The Blu-ray Disc specifications have been established mainly by leading electronics, PC and gaming manufacturers around the world, including Panasonic. These companies will support BD promotion by introducing a variety of hardware. A number of major motion picture production companies have expressed their support. A variety of software can be expected to hit the market before long.

AV Receiver

SA-XR700

Up to 7.1 channels of high-quality audio can be recorded on a Blu-ray disc. When the SA-XR700 is connected via HDMI cable to the DMP-BD10, it digitally amplifies the 7.1-channel digital signals and outputs plenty of clean power to drive the speakers.

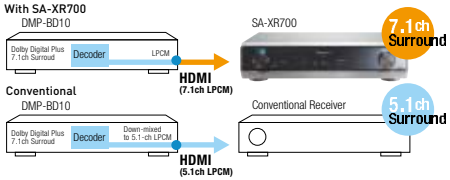
A Pure, Clear Sound to Match the Beautiful Images

Rear Panel

HDMI Solution for HD Entertainment

8ch Linear PCM Input through HDMI

The DMP-BD10 decodes the Dolby Digital Plus format's 7.1-channel surround sound signals, converts them to linear PCM, and outputs them through an HDMI terminal. The SA-XR700 receives these signals through its HDMI terminal and digitally amplifies them to produce a dynamic 7.1-channel surround sound. Only HDMI-compatible products can unlock the full digital surround sound potential made possible by the huge amount of audio data on a Blu-ray disc.



Dual HDMI Input

Equipped with two HDMI input terminals and one output terminal, the SA-XR700 can connect with both the DMP-BD10 Blu-ray Disc™ Player and another HDMI-compatible video component, such as an HD-broadcast set-top box. A number of HDMI-ready products will be introduced in the near future. Connect any of these to the SA-XR700, and you can choose it as the input source by just turning the selector dial.

Full HD 1080p Video Transmission

The SA-XR700 has both HDMI input and output terminals. It can receive signals from a source connected via HDMI cable and output them via HDMI cable to a TV. Since the SA-XR700 supports video sources with resolution up to 1080p, it can receive full-HD video signals from a Blue-ray Disc™ player and send them in original form to a TV for degradation-free display.

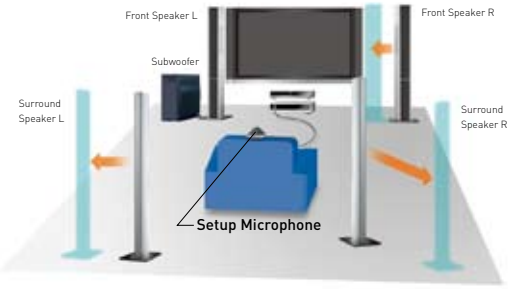
Viera Link

With an all-Viera Link home cinema system, watching a movie is easy as a single touch. Pressing a single button on the remote control turns on the TV, receiver, and Blu-ray Disc™ player, displays the playback image, mutes the TV sound, and outputs the sound from the receiver. It's all done instantly, automatically. All you have to do is sit back and watch.

Easy & Convenient

Auto Speaker Setup

Auto Speaker Setup makes time-consuming speaker settings quickly and easily. Simply connect the speaker setup microphone, place it at your usual listening position, and press and hold the Test button on the remote control to start the automatic setup. This function detects the number of connected speakers, their polarities, distances and sizes. It also measures the speaker and room characteristic, and sets the most suitable speaker output level and characteristics. The SA-XR700 takes care of everything, and creates the optimal listening environment for your room.



High Quality Audio

Full-Digital Processing

The SA-XR700 features digital processing from signal input all the way through to output. Its amazing amplification lets you enjoy the full potential of today's most advanced audio sources, such as Blu-ray discs. And because our amplifiers are compatible with frequency sampling up to 192kHz, the SA-XR700 is able to reproduce the lifelike sounds of high-quality 192kHz/24bit 2-channel sources. You can also enjoy faithful reproduction of analogue audio signals because the SA-XR700 can convert analogue sources into 192kHz/24bit digital signals.

Pure Water Capacitor

A Pure Water Capacitor containing a rayon separator is used as the electrolytic capacitor for each of the seven audio channels. With its high water content this capacitor offers excellent electrical characteristics and low impedance. The clean electric current it delivers to the speakers helps achieve a clear, transparent sound.

Gold-Plated Terminals

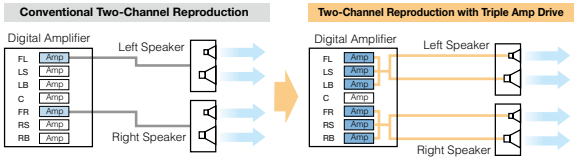
The input and output terminals are gold-plated to resist oxidation and ensure high electrical conductivity. This helps minimise the signal degradation that could otherwise occur over the years.

Digital Amp Multi Drive Technology

Dual Amp

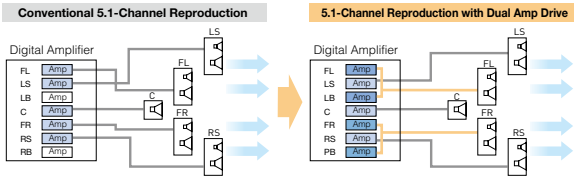
Triple Amp Drive

When the home cinema system is playing a two-channel audio source from a DVD-Audio or CD using only the front two speakers, the SA-XR700 will automatically drive each of the two channels using three amps, with no need to re-connect the speaker cables. This lets you enjoy a crisper bass, richer acoustic presence, and expansive instrumentals and vocals. Bi-wiring speaker connection also reproduces a higher-quality sound with better high-range and low-range frequency characteristics.



5.1ch with Dual Amp Drive (Advanced Dual Amp)

With the SA-XR700's Dual Amp Drive system, two amps are automatically used to drive each of the two front channels when a 5.1-channel source is being played, with no need to re-connect the speaker cables. This enhances realism and ambience in movie soundtracks by delivering high-quality sound from the left and right front channels, which play such an important role in reproducing movie sound effects and background music.



Home Theatre Speaker System

SB-TP1000

The Twin Centre design is Panasonic's answer to how the centre speakers should be on a large-screen HD TV. Other than the subwoofer, all of the speaker units can be mounted on the wall. The speaker system makes a perfect match with the flat-panel TV, helping make Panasonic's home cinema system an attractive addition to the decor.

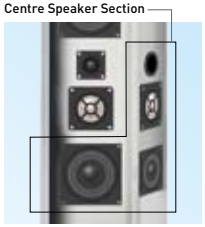
Twin Centre Developed as a Centre Speaker Solution for Large-Screen HD TVs

A Beautiful Blend of Function and Design

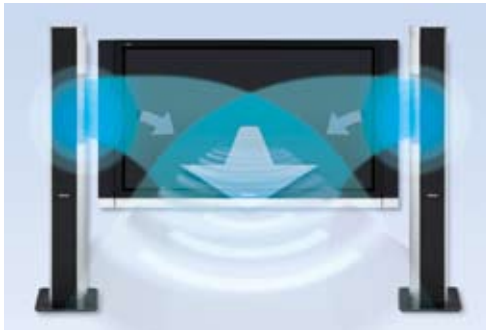
The rhombus-shaped speaker cabinet resulting from the twin-centre speaker has been finished in a beautiful, rounded form. While adding rigidity, this also helps reduce unwanted inner standing waves.

Why Twin Centre?

With the high resolution of HD images, people can enjoy sitting closer to the TV – just like having front-row seats at the theatre. As TVs get bigger, the centre speaker gets farther away from the screen centre. This means that, when watching a large-screen HD TV, you're close to the screen and the centre speaker is too low – so dialogue in a movie seems to come from well below the picture. Panasonic solves this problem with the Twin Centre. The centre speaker is integrated into the right and left front speakers, so the sound seems to come right out of the screen. This screen-centre sound effect can also be enjoyed by viewers who sit slightly to the right or left of the screen's centre, and it achieves a virtually seamless surround effect. This eliminates the hassle of trying to find a good place to set the centre speaker.



This is a conceptual drawing intended to show the speaker structure. The speaker net is not detachable.



Front/Centre Speaker

Twin Centre front speakers are ideal for today's large-screen HD TVs. From pure ultra-high 100-kHz frequency sounds to crisp mid-range sounds, these speakers deliver superb reproduction over a wide dynamic range, while creating a remarkably lifelike acoustic ambience and outstanding surround effect. The speaker units are wall-mountable.

Front Speaker Section

1 Bass-Reflex Port

2 100kHz Super Sonic Tweeter

The Super Sonic Tweeter can reproduce high-frequency sounds all the way up to 100 kHz. Because this tweeter can reproduce even the peaks of the high-frequency range, it replicates the harmonics of a musical source. You get a pure, true-to-life sound with all the nuances and subtlety of the original.

3 2.5cm Titanium Dome Tweeter

The diaphragm of the tweeter is made of titanium. This new design offers dramatically improved responsiveness and fidelity while complying with the high-end specifications of DVD-Audio. It also features a neodymium magnet with minimal distortion. The combination results in a clear, beautiful high-frequency sound.

4 8cm PP Mica Graphite Woofer

The PP mica graphite used in the woofer diaphragm has high rigidity and internal loss, for a crisp, natural sound. It combines with the 4-layer voice coil to produce rich mid-level and bass sounds that are both crisp and lifelike.

Rubber bushing absorbs cabinet resonance.

Floating-mount System

The woofer and the mid-range are mounted in the cabinet using a floating-mount system to reduce unwanted cabinet resonance.

This is a conceptual drawing intended to show the speaker structure. The speaker net is not detachable.

Centre Speaker Section

3 2.5cm Titanium Dome Tweeter

5 6.5cm PP Mica Graphite Mid Range

The PP mica graphite used in the mid-range speaker diaphragm also exhibits high rigidity and internal loss, allowing it to produce extremely natural sound. It further combines with a neodymium magnet to deliver clear, crisp, easy-to-understand dialogue with minimal distortion.

6 8cm PP Mica Graphite Woofer

Alminium Cabinet

The speaker cabinet is constructed of extruded aluminium and features a monocoque construction for high rigidity.

Bi-Wiring Terminal

The gold-plated terminals support bi-wiring connection.

Centre Speaker

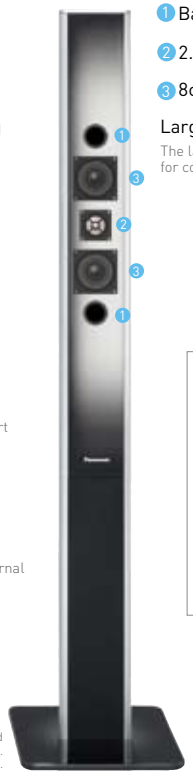
Front Speaker (Bi-Wiring)

OFC Internal Wiring Material

OFC (oxygen-free copper) wires are used for internal wiring to achieve extremely pure sound quality.

Independent Front/Centre Structure

The front speaker section is partitioned from the centre speaker section with a high-internal-loss foam material to prevent mutual interference and reduce cabinet resonance.



This is a conceptual drawing intended to show the speaker structure. The speaker net is not detachable.

Surround Speaker

The Titanium Dome Tweeter can reproduce frequencies as high as 50 kHz. The PP Mica Graphite Woofer provides rich, clear mid-range sounds and covers a wide dynamic range. The speaker units are wall-mountable.

1 Bass-Reflex Port

2 2.5cm Titanium Dome Tweeter

3 8cm PP Mica Graphite Woofer

Large Speaker Terminal

The large gold-plated terminals are suitable for connecting high-grade speaker cables.

Active Subwoofer

Featuring two high-output 100 W amps, the Dual Drive System reproduces frequencies all the way down to 28 Hz. It delivers a rich, ultra-deep bass with minimal resonance.

Dual Drive System with 17cm Long Stroke Woofers

Two of the 17cm speakers are positioned opposite each other in the cabinet on the same front-to-back axis, and a Dual Drive system is used to cancel out unwanted vibration. This unique layout takes advantage of the cabinet's own vibration.Also, the standing waves in the room that adversely affect bass sound quality are reduced by the distance between the units.

Control Panel

Aero Stream Bass-Reflex Port

We gave the Aero Stream Bass-Reflex Port a smoother shape to reduce noise from turbulent air currents when the unit is played at high volumes. The smoother air flow helps achieve a crisp, clean bass with minimal distortion.

Two Built-in 100-W Amplifiers

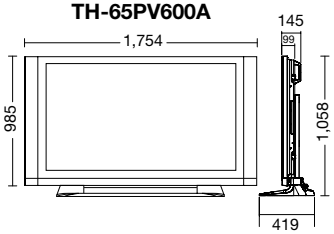
PDP TH-65PV600A
Specifications

			TH-65PV600A
TV TUNER	PAL Tuner Integrated		•
	Tuning System		PLL synthesiser 100-position auto-search tuner
	CATV Compatibility		Hyper-band
	Broadcast Stereo Reception		NICAM -B, G, I, L, German (A2)
	Teletext Reception		2000P Level 2.5, FASTEXT/LIST/TOP
	Receiving System		PAL -B/G/H
PICTURE	Screen Size		65" (165 cm) diagonal
	Screen Aspect		16 : 9 Wide
	Black Box Tech.	Viera Processor	•
		Viera Driver	•
		Viera Panel	•
	Panel		G9 Progressive Full-HD Plasma Panel
	Progressive Scan		•
	Number of Pixels		2,073,600 (1,920 x 1,080) pixels
	Colour System		NTSC/PAL/PAL 60Hz/M-NTSC
	Applicable PC signals		SXGA
	Applicable Scanning Format		525 (480)/60i, 525 (480)/60p, 625 (576)/50i, 625 (576)/50p, 750 (720)/50p, 750 (720)/60p, 1125 (1080)/50i, 1125 (1080)/60i, 1125 (1080)/60p (HDMI only), 1125 (1080)/50p (HDMI only)
	Displayable Colours		29 billion equavalent colours for darker part
	Contrast Ratio (in dark surroundings)		5,000:1
	Shades of Gradation		4,096 equivalent steps of gradation
	3D Colour Management		•
	Sub Pixel Control		•
	MACH Enhancer		•
	Motion Pattern Noise Reduction		•
	C.A.T.S. (Contrast Automatic Tracking System)		•
	Video Noise Reduction		•
	3D Comb Filter		•
	Picture Mode		Standard/Dynamic/Cinema/Auto
SOUND	Speaker System		Detachable 3-way, 6-speakers
	Speakers		Lowrange & Midrange (57 x 126 mm oval) x 4, Tweeter (52 mm round) x 2
	Audio Output		30 W (15 W x 2), 10% THD
	Sound Mode		Music/News/Cinema
	SRS TruSurround XT		•
TERMINALS	SD Memory Card Slot		•
	HDMI Input		3 (1 front, 2 rear)
	Composite Video Input		AV4: RCA phono type x 1 (front)
	S-Video Input		AV4S: Mini DIN 4-pin x 1 (front)
	Audio Input (for Video)		AV1/2/3/4: RCA phono type connectors [L, R] (3 rear, 1 front)
	PC Input		Mini D-sub 15-pin x 1 (rear)
	Component Video Input		AV2/3: RCA photo type (Y, PB/CB, PR/CR) (2 sets rear)
	Audio Input (for HDMI, PC)*		RCA phono type connectors [L, R] x 2 sets (rear x 1 set, front x 1 set for HDMI3)
	Monitor Out		RCA phono type (1 rear)
	Audio Output		RCA phono type connectors (L, R) (1 set rear), Headphone jack (1 front)
FEATURES	Screen Saver		-
	Multi Window		PIP/POP/PAT/PAP
	Aspect Controls		16:9/14:9/Just/4:3/Zoom1/Zoom2/Zoom3
	On-Screen Display Languages		English
	Off Timer		•
	Child Lock		•
GENERAL	Power Supply		AC 220 – 240 V, 50/60Hz
	Power Consumption	(Normal Use)	770W
		(Standby)	0.3W
	Dimensions (W x H x D)		With speakers: 1,754 x 985 x 145 (panel part: 99) mm
	Weight		79 kg
	Operating Temperature		0°C - 40°C

*If converted from DVI source.

Dimensions (Unit: mm)

TH-65PV600A



Optional Accessories

Pedestal

TY-ST65PV500

Dimensions (W x H x D)/ Weight:
1,243 x 765 x 419 mm / 25.3 kg

Wall-hanging Bracket

TY-WK65PV7

Dimensions (W x H x D)/ Weight:
1,320 x 604 x 75 mm / 8.3 kg

Speaker

TY-SP65PV600

Dimensions (W x H x D)/ Weight:
200 x 985 x 99 mm / 2.8 kg

PDP TH-65PV600A

VIERA

Full HD
(1,920 x 1,080p)

Viera Black Box Technology for Ultimate High Picture Quality
- 1080p Digital Processing Chip-Set
- 1080p Digital Re-mastering Processor
- 4,096 Equivalent Steps of Gradation
- 5,000 : 1 Contrast
- Contrast Management System
- Advanced 3D Colour Management
- Motion Pattern Noise Reduction
- Sub-Pixel Controller

Other Features
- Viera Link*
- SD Card Networkability
- SRS TruSurround XT
- Detachable 3-Way, 6-Speakers System
- 3 x HDMI/PC Input

PIXEL STATEMENT - Plasma TV

An image on a Plasma TV is created by many small dots known as pixels (this is similar to the image in a newspaper). The more pixels on the panel the more detailed image can be displayed. For example, the TH-65PV600A contains 1,920 rows of 1,080 pixels in each row; which gives a total of 2.07 million pixels.
To create a colour image each pixel is made up of three tiny million individual dots manufactured into the panel. Each one of these dots is precisely controlled by the electronics of the TV to produce the picture.
Whilst Panasonic maintains the highest standards in manufacturing technology and processes in the construction of these panels, there are a number of allowable Pixel/Dot failures that would still allow the panel to be defined as a good panel. It is not possible to guarantee absolutely no pixel loss.

Panasonic HDMI Cables

HDMI HIGH-DEFINITION MULTIMEDIA INTERFACE

1.5m
RP-CDHG15

3m
RP-CDHG30

5m
RP-CDHG50

* For LCD models, an HDMI cable length of 7 metres maximum is recommended.
* Depending on the cable used, this function may not be possible.
Panasonic HDMI cables are highly recommended.

Blu-ray Disc™ Player DMP-BD10

1. High Definition Player: 1080p Playback Capability with P4HD (Pixel Precision Progressive Processing for HD)
2. High Quality Sound: Dynamic Range of 118dB and High-Precision 192kHz/24bit Audio DAC
3. Intelligent Control: Viera Link for Panasonic BD Product Lineup

Video Features

- P4HD (Pixel Precision Progressive Processing for HD)
  - Precise Pixel Generation
  - 16-Level Motion Detection with Pixel-Based Motion Adaptive
  - Diagonal Processing
  - 3:2/2:2* Pull-Down Progressive Processing
  - i/p Conversion for 1080p** Playback
  - Up-conversion to 1080p** Playback

* 2:2 Pull-down: DVD only.
** HDMI connection required.

- 297MHz/14bit Video D/A Converter
- Progressive Scan* for Plasma Display/ LCD/ LCD Projector** (4:4:4 Signal Processing/ Letterbox Zoom)

* To enjoy a progressive scan picture, a TV with progressive scan capabilities must be used.
** With compatible inputs

- Digital Noise Reduction (DNR/ 3D-NR/ Integrated DNR)
- Picture Mode (Normal, Soft, Fine, Cinema, User)
- Picture Adjustment (Brightness, Colour, Contrast, Sharpness, Gamma Correction)

Audio Features

- Dynamic Range of 118dB
- 192kHz/24bit Audio D/A Converter
- Audio Re-Master
- Virtual Battery Operation
- Built-in Dolby Digital Plus & DTS Decoder
- Advanced Surround (V.S.S.) Creates a Surround Effect for DVD from Only Two Speakers (2 Modes)
- Dialogue Enhancer
- Dynamic Range Compression

Output

- 1 HDMI Terminal
- SCART Terminal (RGB Output)
- Component Video Out
- S-Video Out
- Video Out
- 7.1ch Audio Out
- 2ch Audio Out x2
- 2 Digital Audio Output (1 Optical, 1 Coaxial)

Convenience Features

- Multi-Format Playback (BD-Video, DVD-Audio, DVD-Video, DVD-RAM, DVD-RW*1, DVD-R*1, DVD-R (Dual Layer)*1, +R*1, +R (Double Layer)*1, +RW*1, SVCD*2, Video CD, CD, CD-R/ RW*3, MP3*4, JPEG)
- Super Hi-Speed Scan: 5 Speeds up to x200
- Easy Setting Guide
- Graphical User Interface
- Audio/JPEG Navigation Menu
- Triple Laser Pickup for BD/DVD/CD Playback
- Remote Control

Specifications

			DMP-BD10
FORMAT	Playable Type		
	BD	BD-Video	•
	DVD	DVD-Audio	•
		DVD-Video	•
	DVD-RAM	DVD-VR	•
		JPEG	•
	DVD-RW*1/ -R*1/ -R (DL)*1	DVD-Video	•
		DVD-VR	•
	+R*1/ +R (DL)*1/ +RW*1	Video	•
	CD, CD-R/RW*2	CD-DA	•
		Video CD	•
		SVCD*3	•
		MP3*4	•
		JPEG	•
INPUT/OUTPUT	HDMI		•
	SCART Terminal (RGB Output)		•
	Component Video Out (Y, PB, PR)		•
	S-Video Out		•
	Video Out		•
	7.1ch Audio Out		•
	2ch Audio Out		•
	Digital Audio Out		• (1 optical, 1 coaxial)
SPECIFICATIONS	Audio S/N		125dB
	Dynamic Range		118dB
	Power Source		AC 230V, 50Hz
	Power Consumption		42W
	Weight (kg)		Approx. 4.5
	Dimensions (W x H x D) (mm)		430 x 85 x 331.6

*1 Discs recorded and finalised on DVD video recorders/cameras.
*2 Playability may vary depending on the contents, discs and quality of the recording.
*3 Disc that cannot be played: "Chaoji VCD" available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.
*4 For contents recorded on CD-R/RW for your personal use only.

"DTS" is a trademark of Digital Theater Systems, Inc.
Design and specifications are subject to change without notice.

AV Receiver SA-XR700

1. Super High-Quality Sound with Full-Digital Amplifier & Advanced Dual Amp Drive / Triple Amp Drive
2. HDMI for High Definition 1080p Transmission
3. Viera Link gives you streamlined control of Panasonic Plasma TV, BD Player and DVD Recorder

- Home Theatre Mode: provides equal high power output of 100W/ch – 7ch (1kHz, 6 ohms, 1% THD) to Left/Centre/Right/ Left Surround/Right Surround/Left Surround Back/ Right Surround Back
- Powerful Stereo Mode: 145W/ch (DIN) – 2ch
- 192kHz/24-bit Audio A/D Converter for Analogue Input
- DVD-Audio Ready for high quality sound (88kHz Reproduction, S/N 103dB)
- Dolby Pro Logic IIx and Dolby Digital EX, DTS 96/24 Decoder and DTS-ES, DTS-NEO:6 Decoder
- Sound Field Control (Music: Live, Pop/Rock, Vocal, Jazz, Dance, Party Movie: Drama, Action, Sports, Musical, Game)
- Bi-Amp Operation Mode with HF/LF Balance and Digital Linear Phase Adjustment
- Independent Simple Subwoofer Level Control
- Auto Speaker Setup for Quick and Easy Speaker Setting
- Auto Speaker Detector
- Status Message Display
- Speaker Configuration Settings for each channel: Large, Small, None (Except L/R Channels)
- A and/or B Speaker Selector
- Multi-Control Jog
- HDMI Terminals (2-In, 1-Out, Viera Link)
- 6ch Discrete Inputs for connection to DVD Player or BD Player with built-in decoder
- 4 Digital Inputs (2 Optical, (2 Coaxial: 192kHz Compatible with DVD))
- Front Audio/Video Input
- Large Speaker Terminals for All Channels
- Subwoofer Output for extended bass reproduction
- Gold Plated Terminals to Preserve Signal Quality
- 3 Component Video Terminals (2-In, 1-Out)
- 5 S-Video Terminals (4-In, 1-Out)
- RDS
- Quartz-Synthesised Digital Tuning System
- 10-Key Direct Tuning (Via Remote Control)
- Universal Remote Control commands most current TVs, VCRs, DVD Recorders and DVD Players

Specifications

			SA-XR700
Power Output	Continuous Power Output (Both Ch. Driven)	DIN (1kHz, THD 1%)	145W x 2 (4ohms)
		20Hz - 20kHz, THD 0.09%	80W x 2 (6ohms)
	Power Output at 1kHz Each Ch. Driven	Front (L/R)	100W x 2 (6ohms, THD 1%)
		Centre	100W (6ohms, THD 1%)
		Surround (L/R)	100W x 2 (6ohms, THD 1 %)
		Surround Back (L/R)	100W x 2 (6ohms, THD 1%)
Power Bandwidth			4Hz-88kHz (6 ohms, THD 0.9%)
Total Harmonic Distortion			0.09 % (6 ohms) (Rated Power at 20Hz-20kHz)
Frequency Response		Input*1	4Hz-88kHz, ±3dB
		DVD6CH	4Hz-44kHz, ±3dB
S/N Ratio at Rated Power (6 ohms)		Digital Input	90dB (103dB, IHF A)
FM Frequency Response			87.50 -108.00MHz
AM Frequency Response		9kHz steps	522 - 1611kHz
		10kHz steps	530 - 1620kHz
Dolby Digital Decorder			• (EX)
Dolby Pro Logic			• (IIx)
DTS Decoder			• (ES/Neo:6)
DTS 96/24 Decoder			•
Auto Speaker Setup			•
HDMI Inputs/ Outputs			2-in, 1-out (HDAVI Control)
Component Video Inputs/ Outputs			2-in, 1-out
S-Video Inputs/Outputs			4-in, 1-out
Video Inputs/Outputs			5-in, 1-out
Digital Inputs			4 (2-optical, 2-coaxial)
6-ch Discrete Inputs			•
Audio Inputs/Outputs			6-in
Subwoofer Output			•
Digital Synthesiser Tuner			•
Remote Control			•
Weight (kg)			5.3
Dimensions (W x H x D) (mm)			430 x 107.5 x 390

*1 : CD, TV/STB, BD/DVD, DVD-RECORDER, VCR, AUX
* Notes:Total harmonic distortion is measured by digital spectrum analyser.
Design and specifications subject to change without notice.

Home Theatre Speaker System SB-TP1000

1. Panasonic Original Twin Centre Speaker reproduces the dialog from the screen regardless the listening position
2. High-quality sound design to enhance the home cinema sound enjoyment (PP Mica Graphite Woofer, Titanium Dome Tweeter, Super Sonic Tweeter, Dual Drive Subwoofer)
3. Solid & non-resonance Aluminum Cabinet to match Panasonic Plasma TV

Common Features
- High Performance Network Design with High Sound Quality Capacitors and OFC (Oxygen Free Copper) Internal Wiring (Front, Centre & Surround)
- Round Form Design Improves Rigidity of the Cabinet & Decreases Internal Standing Waves (Front, Centre & Surround)
- Resonance-Reducing Aluminum Monocoque Cabinet for Optimum Rigidity (Front, Centre & Surround)
- Gold-Plated Large Speaker Terminals Help Preserve Sound Quality (Front, Centre & Surround)
- Anti-Vibration Mounting Method Reduces Unwanted Cabinet Resonance (Front, Centre & Surround)
- Wall-Mountable Design (Front, Centre & Surround)

Front / Centre Speaker
- Independent Front/ Centre Internal Structure to Prevent Mutual Interference and Reduce Cabinet Resonance

Front Speaker Section
- 3-Way, 4-Speaker System
- DVD-Audio Ready, Wide Frequency Range up to 100kHz (-16dB) with Super Sonic Tweeter
- High Responsiveness 2.5cm Titanium Dome Tweeter with Neodymium Magnet Realizes Crystal-Clear High-Range Sound Reproduction
- 8cm Woofer Employing High Sound Speed, High Internal Loss PP Mica Graphite Diaphragm with 4-Layer Voice Coil for Rich Bass and Transparent Midrange Sounds
- Bi-Wiring Connection Capable for Higher Quality Sound Reproduction

Centre Speaker Section
- 3-Way 3-Speaker System
- DVD-Audio Ready, Wide Frequency Range up to 50kHz (-16dB) with Titanium Dome Tweeter
- High Responsiveness 2.5cm Titanium Dome Tweeter with Neodymium Magnet Realises Crystal-Clear High-Range Sound Reproduction
- 6.5cm Midrange Employing High Sound Speed, High Internal Loss PP Mica Graphite Diaphragm with Neodymium Magnet for Undistorted Clear Dialogue and Transparent Midrange Sounds.
- 8 cm Woofer Employing High Sound Speed, High Internal Loss PP Mica Graphite Diaphragm with 4-Layer Voice Coil for Rich Bass and Transparent Midrange Sounds.

Surround Speaker
- 2-Way, 3-Speaker System
- DVD-Audio Ready, Wide Frequency Range up to 50kHz (-16dB) with Titanium Dome Tweeter
- High Responsiveness 2.5cm Titanium Dome Tweeter with Neodymium Magnet Realises Crystal-Clear High-Range Sound Reproduction
- 8cm Woofer Employing High Sound Speed, High Internal Loss PP Mica Graphite Diaphragm with 4-Layer Voice Coil for Rich Bass and Transparent Midrange Sounds.

Subwoofer
- Dual Drive Construction Reduces Unwanted Vibration of Cabinet and Standing Waves
- Built-in Total 200W Power Amplifier
- Double Damper Construction 17cm Long Stroke Woofer with Double Motion Damper and Rubber Edge Enables Powerful Bass Sound
- 6-Layer Voice Coil and Powerful Magnetic Circuit Enable Powerful Deep Bass Reproduction
- Capable of Reproducing Down to 28Hz (-16dB)
- Aero Stream Port Minimises Distortion
- Low Pass Filter with Selectable Cut-Off Frequency
- Phase Switch (Normal/Reverse)
- Auto Power ON/OFF Function

Specifications

		SB-TP1000			
		FRONT		SURROUND	SUBWOOFER
		FRONT SECTION	CENTRE SECTION		
Number of Speakers		2		2	1
Configuration		3-way, 4-speaker Bass-reflex	3-way, 3-speaker Bass-reflex	2-way, 3-speaker Bass-reflex	2-speaker Bass-reflex
Woofer		8cm cone type x 2	8cm cone type	8cm cone type x 2	17cm cone type x 2
Mid Range		—	6.5cm cone type	—	—
Tweeter		2.5cm dome type	2.5cm dome type	2.5cm dome type	—
Super Tweeter		1.2cm dome type	—	—	—
Impedance		6 Ω	12 Ω	6 Ω	—
Input Power (IEC)	MAX	200 W	100 W	200 W	—
	RATED	100 W	50 W	100 W	—
Sound Pressure Level		82.5dB/W [1.0m]	80dB/W [1.0m]	82.5dB/W [1.0m]	83dB/W [1.0m]
Frequency Range		65 Hz - 100 kHz [-16dB]	65 Hz - 50 kHz [-16dB]	65 Hz - 50 kHz [-16dB]	28 Hz - 300 Hz [-16dB]
Built-in Amp		—	—	—	• [100W x 2/ 0.9%THD]
Large Speaker Terminal		• (Bi-Wire)	•	•	—
Weight [kg]	With the stand	12.6		9.3	22
	Wall mounted	5.4		3.7	
Dimensions [W x H x D] [mm]	With the stand	279 x 1298 x 279		279 x 1298 x 279	254 x 496 x 500
	Wall mounted	175 x 802 x 102		125 x 802 x 87	

DVD Recorder DMR-EX75

Specifications

			DMR-EX75
Playable Discs*1	DVD-RAM/-R/-R (DL)/-RW		•
	+R/+R (DL)/+RW		•
	DVD-Video, DVD-Audio		•
	CD-Audio (CD-DA)		•
	SVCD*2		•
	Video CD		•
	MP3/CD-DA/Video-CD/SVCD/ JPEG on CD, CD-R/RW*3		•
	DivX*4 on CD, CD-R/RW, DVD-R		•
Recordable Discs*5	DVD-RAM	Ver.2.0	•
		Ver.2.1	• 3x Speed DVD-RAM Revision 1.0
		Ver.2.2	• 5x Speed DVD-RAM Revision 2.0
	DVD-R	for General Ver.2.0	•
		for General Ver.2.0	• 4x Speed DVD-R Revision 1.0
		for General Ver.2.x	• 8x Speed DVD-R Revision 3.0
		for General Ver.2.x	• 16x Speed DVD-R Revision 6.0
		for DL Ver.3.0	•
		for DL Ver.3.x	• 4x Speed DVD-R for DL Revision 1.0
	DVD-RW	Ver.1.1	•
		Ver.1.x	• 2x Speed DVD-RW Revision 1.0
		Ver.1.x	• 4x Speed DVD-RW Revision 2.0
		Ver.1.x	• 6x Speed DVD-RW Revision 3.0
	+R	Ver.1.0	•
		Ver.1.1	•
		Ver.1.2	•
		Ver.1.3	•
		for DL Ver.1.0	•
	+RW	Ver.1.1	•
		Ver.1.2	• 4x Speed
Recording Format	DVD-RAM		DVD Video Recording Format
	DVD-R, DVD-R (DL), DVD-RW		DVD-Video Format
Built-in Hard Disk Capacity			160GB#
Recording Time (Approximate)	Hard Disk Drive	XP Mode	36 hours
		SP Mode	70 hours
		LP Mode	138 hours
		EP Mode*6	212/284 hours
	4.7GB# Disc	XP Mode	1 hour
		SP Mode	2 hours
		LP Mode	4 hours
		EP Mode*6	6/8 hours
	8.5GB# DVD-R DL / +R DL Disc	XP Mode	1 hour 45 minutes
		SP Mode	3 hours 35 minutes
		LP Mode	7 hours 10 minutes
		EP Mode*6 [DVD-R DL only]	10 hours 45 minutes/14 hours 20 minutes

VIDEO	Video System		PAL colour signal, 625 lines, 50 fields/ NTSC colour signal, 525 lines, 60 fields
	Recording System		MPEG2 (Hybrid VBR)
	Input	Video In	AV1/AV2 (21pin), AV3/AV4 (pin jack)
		S-Video In	AV2 (21 pin), AV3/AV4 (S terminal)
		RGB In	AV2 (21 pin) [PAL]
	Output	Video Out	AV1/AV2 (21 pin), Video Out (pin jack)
		S-Video Out	AV1 (21 pin), S-Video Out (S terminal)
		RGB Out	AV1 (21 pin) [PAL]
	Component Video Output (Y, PB, PR)		•
AUDIO	Recording System		Dolby Digital 2ch, Linear PCM (XP mode 2ch)
	Input	Audio In	AV1/AV2 (21pin), AV3/AV4 (pin jack)
	Output	Audio Out 2ch	AV1/AV2 (21 pin), Audio Out (pin jack)
		Digital Audio Out	Optical terminal (PCM, Dolby Digital, DTS, MPEG)
TUNER	Tuner System		PAL-BGH, SECAM-BG, DVB-T
	Channel Coverage		VHF: CH E2-E12, UHF: CH 21-69, CATV: CH S01-S05 (S1-S3), S1-S20 (M1-U10), S21-S41 (DVB-T), VHF: CH5-12 UHF CH 21-69
DV Input			•
HDMI Output			•
SD Memory Card Slot*7			•
General	Power Supply		AC 220-240V, 50Hz
	Power Consumption (Approximate)	Normal Use	33 W
		Standby mode	2 W
	Dimensions (W x D x H) (Approximate) (mm)		430 x 329 x 58
	Weight (Approximate) (kg)		4.3
	Operating Temperature		5 - 40 °C
	Operating Humidity Range		10-80 %RH (no condensation)

*1 Discs recorded and finalised on DVD video recorders/cameras.
*2 Disc that cannot be played: "Chaoji VCD" available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.
*3 It may not be able to play some CD-R or CD-RW (MP3, CD-DA, Video CD, JPEG formatted discs) due to the condition of the recording.
*4 Official DivX® Certified™ product.
Plays DivX® 5, DivX® 4, DivX® 3 and DivX® VOD video content (in compliance with DivX® Certified™ technical requirements).
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*5 Discs recorded on the Panasonic DVD Recorder may not be able to play on some DVD players, depending on the player, the disc, and recording condition.
*6 In EP mode you can select either 6 hours or 8 hours of recording. The sound quality in 6-hour EP mode is higher quality than in 8-hour EP mode.
*7 DMR-EX75 is compatible with SD Memory Card/miniSD™ Cards [A miniSD™ adaptor needs to be inserted]. These units are compatible with DCF based, still picture (JPEG) files recorded using a digital camera. These units are not compatible with sound, moving pictures or still pictures not in accordance with DCF standards (i.e. MOTION JPEG etc), or with types of still pictures other than JPEG/TIFF.
When saving still pictures on Hard Disk Drive, it is recommended that you copy them to the SD Memory Card or DVD-RAM also.
1GB = one billion bytes. Useable capacity will be less.

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